

MCA
(SEM I) THEORY EXAMINATION 2022-23
FUNDAMENTAL OF COMPUTERS AND EMERGING TECHNOLOGIES

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.**2 x 10 = 20**

- (a) Compare computer hardware and software with example.
- (b) What is the function of output unit?
- (c) Define the term operating system.
- (d) Discuss the limitations of local area network.
- (e) Write a short note on the concept of Internet of things.
- (f) Explain the function of web browser in short.
- (g) Briefly explain any two application areas of block chain.
- (h) Differentiate between public and private cloud.
- (i) State features of quantum computing.
- (j) Define the term green computing.

SECTION B

2. Attempt any three of the following:**10x3=30**

- (a) What do you mean by primary memory? Explain. Discuss its types.
- (b) Discuss multiprogramming, multitasking and multiprocessing operating system.
- (c) Describe basic services of Internet.
- (d) Explain the concept of Software-as-a-service. Compare it with Platform-as-a-service.
- (e) Discuss and compare concepts of augmented reality and virtual reality.

SECTION C

3. Attempt any one part of the following:**10x1=10**

- (a) Define the term algorithm. Discuss its characteristics? Write an algorithm to find maximum of two numbers.
- (b) Differentiate among assembler, compiler and interpreter.

4. Attempt any one part of the following:**10x1=10**

- (a) Describe any four topologies with their respective advantages and limitations.
- (b) Discuss the role of operating system in process management, file management, device management and memory management.

5. Attempt any *one* part of the following: 10x1=10

- (a) Explain historical development of Internet.
- (b) Discuss IOT reference model with the help of a diagram.

6. Attempt any *one* part of the following: 10x1=10

- (a) Discuss AWS. Describe any five services of AWS.
- (b) What do you mean by the term cloud computing? What are its application areas? Explain.

7. Attempt any *one* part of the following: 10x1=10

- (a) Discuss the need of brain-computer interface. Explain its features and limitations.
- (b) Describe various components of a grid with diagram.

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